

ABSTRACT OF THE DISCLOSURE

An optical system includes a cavity which comprises a
5 semiconductor light-emitting device, and an optical fiber having a first
terminal optically coupled to the semiconductor light-emitting device, the
cavity having a cavity length defined between a first facet of the
semiconductor light-emitting device and a second terminal of the optical
fiber, wherein a length of the optical fiber is such that a mode-locking
10 oscillation frequency is not more than 1GHz.